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**Specifikacija za plinske aparate na utekočinjeni naftni plin – Ogrevalne  
naprave za zaprte prostore za vgradnjo v vozila in čolne – Dopolnilo A1**

Specification for dedicated LPG appliances – Room sealed LPG space heating  
equipment for installation in vehicles and boats – Amendment A1



ICS

English Version

## Specification for dedicated LPG appliances - Room sealed LPG space heating equipment for installation in vehicles and boats

Spécifications pour les appareils fonctionnant  
exclusivement aux GPL - Appareils de chauffage à circuit  
étanche fonctionnant aux GPL à installer dans les  
véhicules et bateaux

Festlegungen für flüssiggasbetriebene Geräte -  
Raumluftunabhängige Flüssiggas-Raumheizgeräte zum  
Einbau in Fahrzeugen und Booten

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 181.

This draft amendment A1, if approved, will modify the European Standard EN 624:2000. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 624:2000/prA1:2005) has been prepared by Technical Committee CEN/TC 181 "Dedicated LPG appliances", the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

## 1 Scope

*Add as a new 3<sup>rd</sup> paragraph:*

"Room sealed LPG space heating appliances for vehicles and boats are using very often warm air as a heat transfer medium. Annex B specifies additional requirements for appliances using water as a heat transfer medium."

## 2 Normative references

*Add the following references:*

EN 60335-1, *Household and similar electrical appliances – Safety – Part 1: General requirements*

EN 60335-2-21, *Household and similar electrical appliances – Safety – Part 2.21: Particular requirements for storage water heaters*

European Directive 89/336/EEC Electromagnetic Compatibility Directive

European Directive 95/54/EC Automotive Directive

European Directive 2001/56/EC modified by 2004/78/EC Heating Systems for Motor Vehicles and their Trailers Directive

European Directive 97/23/CEE Pressure Equipment Directive (PED)

## 3 Terms and definitions

*Add the following terms and definitions:*

### 3.61

#### **central water heater**

room sealed LPG space heating appliance using water as a heat transfer medium (heating water)

### 3.62

#### **heating water**

water, which may incorporate additives, used as a heat transfer medium

### 3.63

#### **sanitary water**

hot water for domestic use

### 3.64

#### **combination water heater**

central water heater incorporating a reservoir for water to be used for space heating (heating water container) as well as a reservoir for sanitary water (sanitary water container)

### 3.65

#### **compensator reservoir**

container to hold and which allows for the expansion of heating water when heated up

### 3.66

#### **open system**

system, open to the atmosphere, for the heating water

**3.67**

**closed system**

pressurized system for the heating water

**3.68**

**heating water circuit**

system of central water heater and all the elements necessary to convey the heating water in the vehicle to the convectors/radiators

**3.69**

**drain valve**

device for draining the heating water

**3.70**

**bleed valve**

device for the removal of air from the heating water circuit

**3.71**

**anti-freeze**

liquid added to the heating water to avoid freezing

**3.72**

**circulation pump**

pump for circulating the heating water in the water circuit

**3.73**

**operating pressure**

relative pressure in a container

**7.3 Instructions for use and user maintenance**

*Add as a new last paragraph:*

If the space heater uses water as a heat transfer medium, the following additional instructions are applicable:

- g) Instructions for normal operation, cleaning and regular maintenance of the appliance;
- h) Information how to inspect the level of the heating water and how to drain, fill and bleed it;
- i) Information regarding acceptable anti-freeze;
- j) Warning that it may be dangerous to reset a temperature limiting device before having the appliance checked;
- k) Information about necessary repairs or replacements in case of overheat cut out to be undertaken by a competent person;
- l) Warning to drain the sanitary water circuit completely, when switching off the central water heater for a prolonged period, or in case of possible frost;
- m) Specific operating instructions.

## 7.4 Instructions for installation

*Add as a new last paragraph:*

If the space heater uses water as a heat transfer medium, the following additional instructions are applicable:

- e) Information on the type of central water heater, such as:
  - open or closed system,
  - maximum operating pressure of the heating water circuit,
  - maximum operating pressure of the sanitary water circuit for combination water heaters;
- f) Information regarding the acceptable materials for pipes, hoses, radiators etc. which are compatible with the material of the heating water container and with anti-freeze liquids;
- g) Information regarding acceptable anti-freeze liquids;
- h) Information regarding the installation of:
  - the circulation pump, if not integral with the central water heater,
  - the compensator reservoir,
  - the whole heating water circuit, in order to facilitate system bleeding,
  - a pressure reduction valve, if water connection to mains supply is possible and the sanitary water system does not withstand at least 8 bar;
- i) Information about necessary checks, repairs or replacements in case of non volatile lockout.



## **Annex B**

### **(normative)**

## **Appliances using water as a heat transfer medium**

### **B.1 General**

For appliances using water as a heat transfer medium the following additional requirements and test methods shall apply.

### **B.2 Requirements**

#### **B.2.1 Mechanical strength**

**NOTE** If the pressure x volume product of the heating water container, or/and the sanitary water container is greater than  $50 \times 10^{-3} \text{ bar} \cdot \text{m}^3$  additional requirements of EU Directive 97/23/CEE Pressure Equipment Directive (PED) are applicable.

##### **B.2.1.1 Heating water container**

The heating water container in an open system shall withstand twice the operating pressure, at least 0,5 bar, whichever is greater.

Closed systems shall withstand 1,5 times the operating pressure, or a minimum pressure of 3 bar whichever is greater.

The container shall not leak, nor being permanently deformed.

**NOTE** Even in open systems the hydraulic pressure in the system can reach higher values, as there may be parts of the system being positioned at high level.

##### **B.2.1.2 Sanitary water container**

The sanitary water container of a combination water heater shall withstand 1,5 times the operating pressure, at least 3 bar, whichever is greater. The container shall not leak, nor being permanently deformed.

If the sanitary water container is in direct contact with the heating water container, both containers are tested with their specified test pressures together and then separately.

##### **B.2.1.3 Stability and fixing**

The central water heater and its accessories, if part of the appliance or delivered with it, shall be so designed that they can be securely fixed to the structure of the vehicle or boat taking into account the forces produced by the moving of the water content(s) during motion.

#### **B.2.2 Electrical safety**

The electrical equipment of the appliance shall fulfil the requirements of European Standard EN 60335-1.